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K&L Gates LLP P.O. BOX 1135 CHICAGO, IL 60690			SHEPPERD, ERIC W	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,590	Applicant(s) LOBIG ET AL.	
	Examiner ERIC W. SHEPPERD	Art Unit 2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☒ Claim(s) 15 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/09/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: In [0007] line 5, the acronym “TDM” is not expanded upon, and is construed as “time-division multiplexed”. In [0021] line 6, the acronym “ADM” is not expanded upon, and is construed as “Add-Drop Multiplex”. In [0022] lines 7-8, the acronyms “AN” and “DLU” are not expanded, and are unclear as to their meaning. In [0022] line 10, the acronym “PRI” is not expanded, and is construed as “primary rate interface”.

Appropriate correction is required.

Claim Objections

2. Claims 15 and 19 are objected to because of the following informalities: In claim 11, line 3 the phrase “a pair of switching system” should be in the plural “a pair of switching systems”. In claim 15, line 5 in the phrase “sending a changeover from the network management command to the monitor” the term “command” appears to be misplaced after “network management” instead of after “changeover”. In claim 19, line 2 in the phrase “does not occur after and end of the loss” the term “and” appears to be a typographical error.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. As to claim 16 lines 3 and 5, the limitation “the hot-standby switching system” lacks proper antecedent basis. For purposes of applying prior art the limitation has been construed as “the redundant switching system”.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 11 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kleine-Altekamp et al (US 6,914,879 B1).

8. As to claim 11, Kleine-Altekamp anticipates a method for backup switching spatially separated switching systems, comprising:

providing a pair of switching systems arranged in a one-to-one redundancy (“Matrix Copy A” and “Matrix Copy B” Kleine-Altekamp Fig. 2, items

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21 and 22), the pair comprising:

a first switching system in an active operating state ("Copy A, 21, operates as an active switching matrix" Kleine-Altekamp column 2 line 47), and

a redundant switching system in a hot standby operating state ("Copy B, 22, is available as a standby matrix" Kleine-Altekamp column 2 line 48);

establishing a first communication between a real-time monitor and the first switching system ("Controller" Fig. 2, item 25 *and* "Alarms and fault messages are signaled by the interface modules and the active switching matrix to the controller" Kleine-Altekamp column 2 lines 30-32); and

changing over to the redundant switching system after a loss of the communication between the monitor and the first switching system ("in the event of a hardware failure in the active switching matrix 21, controller 25 will switch to the second, redundant switching matrix 22" Kleine-Altekamp column 3 lines).

9. As to claim 19, Kleine-Altekamp discloses the invention as claimed as described in claim 11, including wherein automatic switching back to the configuration existing before the loss of communication does not occur after an end of the loss of communication ("After the errors or faults that caused the failover have been detected and diagnosed, recovery, repair and reconfiguration actions may take place. Then the reversed process of failover, which is termed failback, can be carried out." Kleine-Altekamp [0048] lines 10-13 *the process of*

fallback can occur after repair and recovery, but is not automatic).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 12-14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleine-Altekamp et al (US 6,914,879 B1), in view of Vosseler (US 2003/0126240 A1).

12. As to claim 12, Kleine-Altekamp substantially discloses the invention as claimed as described in claim 11, failing however to include exchanging cyclical messages between the monitor and a first central controller in the first switching system and a second central controller in the redundant switching system.

Vosseler describes a system for monitoring objects within an IT network, comprising clustered and normal nodes that are monitored by a service monitoring server. Nodes of clusters each comprise an agent that communicates with both the monitoring server and a cluster operating system, to determine and relay cluster package status information.

With this in mind, Vosseler discloses exchanging cyclical messages ("According to a first embodiment, the agents 11a, 11b periodically send requests

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to the cluster operating system 20 which returns the requested activity/standby information" Vosseler [0046] lines 25-28) between the monitor ("Cluster Controller" Vosseler Fig. 2a, item 6) and a first central controller ("Agent" Vosseler Fig. 2a, item 11a) in the first switching system ("Cluster Node" Vosseler Fig. 2a, item 4) and a second central controller ("Agent" Vosseler Fig. 2a, item 11b) in the redundant switching system ("Cluster Node" Vosseler Fig. 2a, item 5). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the system of Kleine-Altekamp with the system of Vosseler as it would provide the advantage of adding further redundancy and reliability to a system, by using failover in clustered systems.

13. As to claim 13, the above combined art substantially discloses the invention as claimed as described in claim 12, including, receiving by the monitor, a positive acknowledgement in response to the test message from the active switching system ("An agent communicates with other software, for example it responds to monitoring or management requests" Vosseler [0026] lines 2-4 *and* "based on notification data, only the agent 11 associated with the cluster node 4 on which the cluster package 10 is currently active generates notification monitoring messages 15 related to the cluster package 10" Vosseler [0046] lines 8-11).

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14. As to claim 14, the above combined art substantially discloses the invention as claimed as described in claim 13, including receiving by the monitor, a negative acknowledgment or no acknowledgement in response to the test message from the hot-standby switching system ("An agent communicates with other software, for example it responds to monitoring or management requests" Vosseler [0026] lines 2-4 *and* "Although an agent 11b is installed on the standby cluster node 5, it does not generate erroneous monitoring messages due to notification data received from the cluster operating system 20 which tell the agent 11b that the monitored cluster package 10 is currently inactive on its associated node 5" Vosseler [0046] lines 3-8).

15. As to claim 16, the above combined art substantially discloses the invention as claimed as described in claim 13, including:

wherein the change over to the redundant switching system is controlled via the monitor ("In the second embodiment, the agents 11a and 11b are notified by the cluster operating system 20 that a failover of the cluster package 10 from the primary node 4 to the secondary node 5 is carried out" Kleine-Altekamp [0047] lines 24-27) by acknowledging cyclical requests by the redundant switching system with a positive acknowledgement ("According to a first embodiment, the agents 11a, 11b periodically send requests to the cluster operating system 20 which returns the requested activity/standby information" Kleine-Altekamp [0046] lines 25-28), and

wherein central controller of the redundant switching system changes over

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to the active operating state ("Agent" Kleine-Altekamp Fig. 2b, item 11b
redundant agent is now active as a result of failover) .

16. As to claim 17, the above combined art substantially discloses the invention as claimed as described in claim 16, including wherein automatic switching back to the configuration existing before the loss of communication does not occur after an end of the loss of communication ("After the errors or faults that caused the failover have been detected and diagnosed, recovery, repair and reconfiguration actions may take place. Then the reversed process of failover, which is termed failback, can be carried out." Kleine-Altekamp [0048] lines 10-13 *the process of failback occurs after repair and recovery, and is not automatic*).

17. Claims 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleine-Altekamp et al (US 6,914,879 B1), in view of Vosseler (US 2003/0126240 A1), in view of Kern et al (US 2004/0260736 A1).

18. As to claim 15, the above combined art discloses the invention as claimed as described, including establishing a second communication between the monitor and a network management ("In addition, controller 25 is connected to the network management system of the communications network" Kleine-Altekamp column 3 lines 25-27) and a crossconnect device ("The crossconnect is controlled by a first controller" Kleine-Altekamp column 3 line 22).

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The above combined art fails to disclose reporting the loss of communication to an active system from a monitor to network management; and sending a changeover command from network management to the monitor.

Kern describes a system for mirroring data at storage locations geographically separate from each other, including a remote failover system.

With this in mind, Kern discloses reporting the loss of communication to an active system from a monitor to network management ("If both storage controllers 304a, 304b are unavailable, then the remote monitoring program 350 generates an alert messages to one or more designated remote network administrators notifying them of the outage and requesting guidance" [0049] lines 14-18); and sending a changeover command from network management to the monitor ("in response to receiving electronic automated notification via pager, phone, etc., the network administrator may access the remote monitoring system 324 from a remote location over the network 308 and indicate whether or not to perform the remote failover" Kern [0049] lines 34-39). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the remote network notification/management of Kern with the system of the above combined art as it would provide greater control of the type of response to a system failure, in a situation in which an incorrect automated decision could be costly.

19. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kleine-Altekamp et al (US 6,914,879 B1), in view of Vosseler (US 2003/0126240

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A1), in view of Kern et al (US 2004/0260736 A1), in view of Mehta et al (US 2004/0078397 A1).

20. As to claim 18, the above combined art substantially discloses the invention as claimed as described in claim 17, failing however to include alerting the network management of the end of the loss of communication.

Kern discloses alerting the network management ("alert messages to one or more designated network administrators" Kern [0049] lines 16-17). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the remote network notification/management of Kern with the system of the above combined art as it would provide greater control of the type of response to a system failure, in a situation in which an incorrect automated decision could be costly.

The above combined art fails to disclose reporting the end of the loss of communication.

Mehta discloses a disaster recovery process for failing over to a specified target, and then failing back to a designated target after the designated target has been recovered.

With this in mind, Mehta discloses reporting the end of the loss of communication ("DR process 100 may be notified when the target's device is ready to return to service" Mehta [0018] lines 9-10). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to

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which said subject matter pertains to combine the disaster recovery process of Mehta with the system of the above combined art as it would increase a system/user's awareness of what is occurring in a failed system and increase the accuracy of resulting actions.

21. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kleine-Altekamp et al (US 6,914,879 B1), in view of Kern et al (US 2004/0260736 A1), in view of Mehta et al (US 2004/0078397 A1).

22. As to claim 20, Kleine-Altekamp substantially discloses the invention as claimed as described in claim 19, failing however to include alerting the network management of the end of the loss of communication.

Kern discloses alerting the network management ("alert messages to one or more designated network administrators" Kern [0049] lines 16-17). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the remote network notification/management of Kern with the system of Kleine-Altekamp as it would provide greater control of the type of response to a system failure, in a situation in which an incorrect automated decision could be costly.

The above combined art fails to disclose reporting the end of the loss of communication.

Mehta discloses a disaster recovery process for failing over to a specified target, and then failing back to a designated target after the designated target

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has been recovered.

With this in mind, Mehta discloses reporting the end of the loss of communication ("DR process 100 may be notified when the target's device is ready to return to service" Mehta [0018] lines 9-10). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the disaster recovery process of Mehta with the system of the above combined art as it would increase a system/user's awareness of what is occurring in a failed system and increase the accuracy of resulting actions.

23. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleine-Altekamp et al (US 6,914,879 B1), in view of Kern et al (US 2004/0260736 A1).

24. As to claim 21, Kleine-Altekamp substantially discloses the invention as claimed as described in claim 11, failing however to include wherein a network management system initiates the changeover via the monitor.

Kern discloses wherein a network management system initiates the changeover via the monitor ("in response to receiving electronic automated notification via pager, phone, etc., the network administrator may access the remote monitoring system 324 from a remote location over the network 308 and indicate whether or not to perform the remote failover" Kern [0049] lines 34-39). It would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains to combine the remote network notification/management of Kern with the system of Kleine-Altekamp as it would provide greater control of the type of response to a system failure, in a situation in which an incorrect automated decision could be costly.

25. As to claim 22, the above combined art substantially discloses the invention as claimed as described in claim 21, including, wherein the network management evaluates a backup switching requirement of a plurality of monitors ("Controller" Kleine-Altekamp Fig. 2, items 25 and 26) and the change over is made only if any of the monitors that can access the network management makes the demand ("the network administrator may return a response to the notification from the remote monitoring system 324 indicating to perform a remote failover or do nothing" Kern [0049] lines 26-29).

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lau (US 2002/0152320 A1), Delaney et al (US 5,996,086), Laranjeira et al (US 6,477,663 B1), Talaugon et al (US 7,096,383 B2), Chaganty et al (US 6,285,656 B1), Dobberpuhl et al (US 7,076,691 B1), Abramson et al (US 2003/0120819 A1), Cheng et al (US 6,823,477 B1), Chung et al (US 6,195,760 B1) and Herbert (US 6,718,383 B1) are all relevant to failover systems.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC W. SHEPPERD whose telephone number is (571)270-5654. The examiner can normally be reached on Monday - Thursday, Alt. Friday, 7:30 AM - 5PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571)272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. W. S./
Examiner, Art Unit 2456

/Ashok B. Patel/
Primary Examiner, Art Unit 2456